

Docket No.: P-0142



PATENT *AF*  
*IPW*

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF APPEALS AND INTERFERENCES**

In re Application of

Confirmation No.: 4534

Kuk Ho BAE and Kwang Chul JU

Group Art Unit: 3713

Serial No.: 09/709,574

Examiner: Julie K. BROCKETTI

Filed: 11/13/2000

Customer No.: 34610

For: GAME SERVICE SYSTEM

**TRANSMITTAL OF APPEAL BRIEF**

U.S. Patent and Trademark Office  
Customer Window, Mail Stop Appeal Brief-Patents  
Randolph Building  
401 Dulany Street  
Alexandria, Virginia 22314

Sir:

Submitted herewith is Appellants Appeal Brief in support of the Notice of Appeal filed February 27, 2006. Enclosed is Check No. 17577 for the Appeal Brief fee of \$500.00.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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**Date: MAY 3, 2006**

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**APPEAL BRIEF**

U.S. Patent and Trademark Office  
Customer Window, Mail Stop Appeal Brief-Patents  
Randolph Building  
401 Dulany Street  
Alexandria, Virginia 223134

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed February 27, 2006. A Pre-Appeal Brief Conference Request was filed on the same date. A Panel Decision to have the Appeal proceed to the Board of Patent Appeals and Interferences was issued April 4, 2006. Therefore, the extendible due date to file this Appeal Brief is May 4, 2006.

**REAL PARTY IN INTEREST**

The real party in interest is the assignee, LG ELECTRONICS INC. The assignment document is recorded at Reel 011302 and Frame 0145.

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### **RELATED APPEALS AND INTERFERENCES**

There are no related appeals and interferences.

### **STATUS OF THE CLAIMS**

This is an appeal from the final rejection dated September 27, 2005 of claims 1-20. Claims 1-20 stand rejected, and are on appeal.

### **STATUS OF AMENDMENTS**

An Amendment under 37 C.F.R. § 1.111 was filed in the U.S. Patent and Trademark Office on July 5, 2005 and was entered by the Examiner. No subsequent Amendments were filed after issuance of the Final Rejection. Therefore, all Amendments filed in this application have been entered. A correct copy of appealed claims 1-20 appears in the attached Appendix.

### **SUMMARY OF THE INVENTION**

The invention relates to digital television systems. The invention is a system and method for transmitting or receiving a video game program to a user's digital television system via regular digital television broadcast transmissions.

Many digital televisions have a common interface connector that allows a special receiving module to be plugged into the common interface connector. The special receiving module decodes or decrypts special chargeable broadcast content that is sent as part of the

regular digital television transmissions. This allows a user to request and view special pay-programming such as movies and pay-per-view sporting events. In practice, the special chargeable programming is multiplexed with the free broadcast programming, and the multiplexed signals are transmitted. The user's digital television receives the broadcast multiplexed signal. If the user requests one of the special chargeable programs, the special receiving module plugged into the user's digital television decrypts or un-scrambles the special chargeable program, and the chargeable program is then played to the user.

In invention makes use of this basic digital television architecture to allow the user to also request and then download video game programs from a remote game server. The user can then play the video games on his digital television.

A system and method, embodying the invention, for transmitting the video game programs and related video game information includes a multiplexer which converts audio and video information for normal broadcast television programming, and a video game program and game-related information into a single multiplexed transport stream. A transmitter of the system and method then channel-codes, modulates, amplifies and transmits the multiplexed transport stream. The multiplexer is a time-division multiplexer.

A system and method for receiving the multiplexed transport stream includes a tuning unit configured to receive the image and audio information of the broadcast signal, a game program ordered by a user, and a game-related information in the multiplexed transport stream. The receiver can then select and display the image and audio information corresponding to a

broadcast channel. Alternatively, the receiver can select and download a game program and associated game-related information, and then allow the user to play the game. The receiving device would include a common game interface module that would be plugged into the common interface connector of the user's digital television. The common game interface module would demodulate the selected game program and game-related information from the broadcast signal and then store the game program in a game memory of the module. The user's equipment might also include a modem that allows the user to make a request for a particular game program from a remote game server.

An embodiment of the invention is shown in Fig. 3 of this application. As shown therein, a transmitting unit 100A contains an MPEG video encoder 100 for encoding input image signals, an MPEG audio encoder 102 for encoding input audio signals, and a game server 104 for providing a game program and game related information. There is also a packetizer 101 for compressing the encoded image signal, and a packetizer 103 for compressing the encoded audio signal. There is a table structure 105 for making a table for the game information. A multiplexer 106 then converts the packetized image and audio information the video game program and game-related information into a time-division multiplexed transport stream (see, for example, page 8, lines 10-19, and page 11, lines 4-6 of the specification). The transport stream is a digital signal which includes the image, audio, game program and game-related data, which are all multiplexed by packet units on a time basis (see, for example, page 11, lines 6-8). The video and audio inputs are for normal television broadcast programming, while the game

program and game-related data are for a video game.

Also as shown in Fig. 3, a receiving device 200A includes a user interface 210 that a user can use to select a certain broadcast channel, or to select a particular game. Actuating signals from the user interface 210 allow a microcomputer 209 to output a first control signal to select broadcast programming for a particular channel. The first control signal is sent to a tuning unit 201, which tunes to a particular broadcast channel.

Also, a second control signal can be used to order a game (see, for example, page 9, lines 6-12). The second signal is sent to a modem 208, which then contacts a remote game server to order a particular game program. This causes the selected game to be multiplexed into the signal corresponding to a particular broadcast channel. The second control signal also causes the tuning unit 201 to tune to the broadcast channel that includes the requested game program and game-related information, which has been multiplexed into the broadcast signal at the transmitting end (see, for example, page 9, lines 13-15). Connected to the tuning unit 201 are a channel decoding unit 202 used to demodulate the broadcast signal of the selected channel. A common interface connector 203 receives the transport stream from the channel decoding unit 202 and sends it to a common interface module 204. The common interface module 204 receives the game program and the game related information, and downloads the game program and processes the game-related information (see, for example, page 9, line 15 through page 10, line 1 and page 10-12). The decoded game program can then be stored in the common interface module 204.

A method embodying the invention for transmitting game programs and game-related information is shown in Fig. 6 of the application. As shown therein, the method includes a step S1 where an image and audio information for a broadcast channel, as well as a game program and game related information are converted into a data transport stream (see, page 17, lines 3-6).

A method embodying the invention for downloading and executing a game is shown in Fig. 7. The game service receiving method includes a step S10 of receiving a transport stream consisting of the image and audio information for a broadcast channel, and a game program and the game related information, and extracting the game list from the transport stream (for example, page 17, line 19 through page 18, line 5). The game list is then displayed to the user, and the user has the option of requesting a specific game. The user-selected game can then be downloaded and played.

### **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

1. Whether claims 1-8, 14, 16, 18 and 20 are anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 5,654,746 to McMullan Jr., et al.
2. Whether claims 9-13 are obvious under 35 U.S.C. § 103(a) over McMullan, in view of U.S. Patent No. 5,935,004 to Tarr et al.
3. Whether claim 15 is obvious under 35 U.S.C. § 103(a) over McMullan, in view of U.S. Patent No. 6,267,672 to Vance.

4. Whether claims 17 and 19 are obvious under 35 U.S.C. § 103(a) over McMullan, in view of U.S. Patent No. 5,489,103 to Okamoto.

### **GROUPING OF THE CLAIMS**

For the convenience of handling of this appeal, the claims are grouped as follows:

Appealed claim 1 forms a single group.

Appealed claim 2 forms a single group.

Appealed claim 3 forms a single group.

Appealed claim 5 forms a single group.

Appealed claim 9 forms a single group.

Appealed claim 14 forms a single group.

Appealed claim 16 forms a single group.

Appealed claim 20 forms a single group.

Claims 1, 2, 3, 5, 9, 14, 16 and 20 are independent. Claims 4, 6-8, 10-13, 15, and 17-19 are dependent. The groups do not stand or fall together.

### **THE ARGUMENT**

In rejecting the claims the Examiner has taken the position that certain claim features that are expressed in functional language merely assert an intended use for the claimed systems. Based on this reasoning, the Examiner deliberately failed to give patentable weight to these



functional limitations. It is respectfully submitted that this reading of the claims is improper, and that the functional limitations should have been given patentable weight.

“A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used” (see MPEP § 2173.05(g), *In re Swineheart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971), and *In re Venezia*, 530 F.2d 956, 189 USPQ 149 (CCPA 1976)). In this application, some claims recite that elements of the systems are “configured to” perform certain functions. It is respectfully submitted that in order to anticipate these claim features, or render the claim features obvious, the cited prior art references must show similar systems that are capable of performing the recited functions. In other words, the functional features appearing after the term “configured to” must be considered. If these functional features of the claims are considered, the functional features recited in the claims clearly define over the applied prior art references.

**A. 35 U.S.C. § 102(b)**

Claims 1-8, 14, 16, 18 and 20 are rejected under 35 U.S.C. §102(b) over U.S. Patent No. 5,654,746 to McMullan, Jr. et al. (hereinafter “McMullan”).

McMullan discloses a communication system for delivering game signals from a source to a user’s home. On the transmitting end, the game programs/information are sent to a cable operator. The cable operator encodes the game information into a particular game channel. In other words, the cable operator modulates the game signals with other program channels and

digital music channels by frequency division multiplexing. This means that each broadcast program channel, each digital music channel and each game program are all transmitted on different frequency “channels.” On the receiving end, a terminal in the form of a game service home adapter receives the frequency multiplexed signals. The terminal is then able to tune to a particular frequency to thereby receive one of the broadcast channels, one of the music channels or one of the game channels.

More specifically, McMullan discloses that a provider of games 100 provides a time division multiplexed game signal which may include a plurality of different games (see, for example Fig. 1, col. 4, lines 32-35). The game provider sends this time division multiplexed game signal to a satellite/cable service provider 125, or a local cable service provider 150. The local service provider 150 then simply encodes this signal into one of its broadcast channel frequencies. Nothing but the game information would be sent on the game channel frequency. In other words, the satellite/cable television provider does not combine the game information with audio and video signals in a time-division multiplexed signal that is sent over one channel frequency. (see for example, FIG. 1, column 5, lines 33-39). It is specifically disclosed in McMullan that the game delivery service signals are frequency division multiplexed at a selected channel (see for example, column 5, lines 43-46). Thus, when the game signals and other service channels are multiplexed in McMullan, they are frequency division multiplexed for transmission to a subscriber location 175. Any disclosure of time division multiplexing in McMullan applies

only to the game data that is sent from the game provider to the satellite/cable television provider.

McMullan discloses that a dedicated game adapter 177, that is connected to a cable plant 156 at a subscriber location 175, receives the game signals sent over a particular channel frequency. The game service home adapter 177 receives the frequency division multiplexed game data channel and demodulates and decodes just the game data and subscriber authorization in the control data (see for example, column 5, lines 47-50). A game player 178 receives such a game adapter 177 in a slot that usually receives a game cartridge. In McMullan, this game adapter 177 is connected to the cable provider (150) so that the game player 178 is able to download and play a plurality of different games through the game adapter 177 without having to change game cartridges containing individual games (see for example, col. 5, lines 50-67).

The game adapter 177, however, can only select game data. It cannot receive or play a regular broadcast programming signal. Specifically, the game adapter 177 includes an RF input 201 for receiving broadband radio frequencies extending 1-2 GHz in bandwidth. The game adapter 177 also includes a tuner/demodulator 202 that tunes to one or more of these frequencies, in particular, to a channel on which the game data is transmitted as QPR modulated data on a frequency in the FM band (see, for example, col. 6, lines 40-47). The tuner/demodulator 202, under the control of a game controller ASIC 200, provides demodulated game data streams to an ASIC input data port via a data bus 230 (see, for example, col. 6, lines 51-53). The game controller ASIC 200 tunes the tuner 202 to a frequency of 50-150

MHz, for example (see, for example, col. 6, lines 60-63), and filters data for the game adapter 177 or the game player 178 so that the game adapter 177 appears as a game cartridge to the game player 178 (see, for example, col. 7, lines 5-17). Only in this context does the ASIC 200 receive demodulated data from the tuner 202 so that the tuner 202 may be tuned to different programmable frequencies (see, for example, col. 7, lines 29-36). The game player 178 is not a receiver configured to receive a regular broadcast signal. More specifically, the home game adapter 177 and the tuner demodulator 202 are disclosed as providing demodulated game data streams, but not the broadcast programming signals. There is no disclosure in McMullan of the ability to select the image and audio information corresponding to a broadcast channel desired by a user. By extension, there is no signal generated by the game controller ASIC 200 that selects the image and audio information corresponding to a broadcast channel desired by a user.

McMullan fails to disclose or suggest a game service receiving device comprising a tuning unit configured to receive the image and audio information of a broadcast signal, a game program ordered by a user, and game-related information, and to select either the image and audio information corresponding to a broadcast channel desired by the user, or the game program ordered by a user, as variously called for in independent claims 1 and 5.

McMullan also fails to disclose or suggest a multiplexer configured to convert image and audio information of a broadcast signal, a game program, and game related information by a packet unit on a time basis into a transport stream, as variously called for in independent claims 2 and 3.

McMullan also fails to disclose or suggest converting image and audio information of a broadcast signal, a game program, and game-related information by packet unit on a time basis into a transport stream, as recited in independent claim 14.

McMullan also fails to disclose or suggest extracting a game list comprising game-related information from a transport stream that includes time basis multiplexed packet units of image and audio information of a broadcast signal, a listing of game programs, and game-related information, as recited in independent claim 16.

McMullan also fails to disclose or suggest a broadcast and game receiving device, comprising a downloader configured to receive a transport stream having time basis multiplexed packet units of image and audio information of a broadcast signal of a channel, a game program, and game related information, and to download a game program ordered by a user using the game related information encoded with the image and audio information of the broadcast signal, as recited in independent claim 20.

In view of the above-described deficiencies in McMullan, it is respectfully submitted that claims 1, 2, 3, 5, 14, 16 and 20 are patentable. Claim 4, which depends from claim 3, claims 6-8, which depend from claim 5, and claim 18, which depends from claim 16, are likewise patentable over McMullan for at least the reason discussed above and for the additional features they recite. Withdrawal of the rejection is respectfully requested.

**B. 35 U.S.C. § 103(a)****1. Claims 9-13**

Claims 9-13 are rejected under 35 U.S.C. §103(a) over McMullan, in view of U.S. Patent No. 5,935,004 to Tarr et al. (hereinafter “Tarr”).

As discussed above, McMullan discloses a tuner demodulator 202 that demodulates game data streams under the control of the ASIC game controller 200. Because the game adapter 177 is merely a cartridge for games that is only able to download games, it and its components do not select or demodulate broadcast programming signals. Consequently, McMullan fails to disclose or suggest a processor configured to receive an input from a user interface, and to output either a first control signal to select a broadcast signal of a channel desired by a user, or a second control signal to order a game desired by the user, as recited in claim 9. McMullan also fails to disclose or suggest a common game interface module configured to receive the first control signal and to demodulate a broadcast signal of a channel selected by user, a game program, and game-related information, as also recited in claim 9.

Tarr fails to overcome the deficiencies in McMullan, as Tarr is merely cited as allegedly teaching a modem configured to receive a control signal to order a game desired by a user and output a corresponding ordering signal.

In view of the foregoing, it is respectfully submitted that independent claim 9 is patentable over the applied references and their combination. Claims 10-13, which depend from claim 9, are likewise patentable over the applied references and their combination for at least the

reasons discussed above and for the additional features they recite. Withdrawal of the rejection is respectfully requested.

**2. Claim 15**

Claim 15 is rejected under 35 U.S.C. 103(a) over McMullan, in view of U.S. Patent No. 6,267,672 to Vance (hereinafter “Vance”).

As discussed above, McMullan fails to disclose or suggest all of the features recited in independent claim 14, from which claim 15 depends. Vance fails to overcome the deficiencies in McMullan as Vance is merely asserted for the teaching of adding a new game program and game related information to a previously established game list. Thus, claim 15 is patentable over the applied references and their combination for at least the reasons discussed above with respect to independent claim 14 and for the additional features it recites. Withdrawal of the rejection is respectfully requested.

**3. Claims 17 and 19**

Claims 17 and 19 are rejected under 35 U.S.C. 103(a) over McMullan, in view of U.S. Patent No. 5,489,103 to Okamoto (hereinafter “Okamoto”).

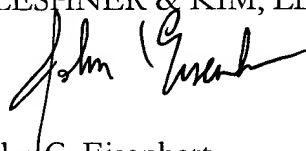
As discussed above, McMullan fails to disclose or suggest each and every feature of claim 16, from which claims 17 and 19 depend. Okamoto fails to overcome the deficiencies in McMullan as Okamoto is merely applied as allegedly teaching displaying an extracted game list to a user on his screen. Thus, claims 17 and 19 are patentable over the applied references and

their combination for at least the reasons discussed above with respect to independent claim 16 and for the additional features they recited. Withdrawal of the rejection is respectfully requested.

**CONCLUSION**

For at least the reasons discussed above, it is respectfully submitted that claims 1-20 are allowable over the applied references. The Appellants respectfully request this Honorable Board to reverse the rejections of the claims.

Respectfully submitted,  
FLESHNER & KIM, LLP

A handwritten signature in black ink, appearing to read "John C. Eisenhart", is written over the printed name.

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**Date: MAY 3, 2006**



**APPENDIX**

1. A game service system, comprising:
  - a game service transmitting device, comprising:
    - a multiplexer configured to convert image information and audio information of a broadcast signal, a game program, and game-related information into a transport stream, and
    - a transmitting unit configured to channel-code, modulate, amplify, and transmit the transport stream; and
    - a game service receiving device, comprising:
      - a tuning unit configured to receive the image and audio information of the broadcast signal, a game program ordered by a user, and game-related information, and to select either the image and audio information corresponding to a broadcast channel desired by the user, or the game program ordered by the user; and
      - a common game interface module configured to demodulate a selected game program and game-related information, to error correct the demodulated information, to download the game program and store the game program in a game memory portion of the common game interface unit for access by a user when desired, and to process the game-related information.

2. A game service transmitting device, comprising:
  - a multiplexer configured to convert image and audio information of a broadcast signal, a game program, and game-related information by packet unit on a time basis into a transport stream; and
  - a transmitting unit configured to channel-code the transport stream, and to modulate, amplify, and transmit the transport stream to a receiving unit when requested by a user.
3. A game server system, comprising a game service transmitting device configured to provide game programs and game-related information, wherein the game service transmitting device includes, a multiplexer configured to convert image information and audio information of a broadcast signal, a game program, and game-related information by packet unit on a time basis into a transport stream, and a transmitting unit configured to channel code, modulate, amplify, and transmit the transport stream.
4. The game server system according to claim 3, wherein the game server is configured to receive a game ordering signal indicating a game desired by a user, and to provide the selected game program and game-related information.

5. A game service receiving device, comprising:
  - a tuning unit configured to receive image and audio information of a broadcast signal, a game program ordered by a user, and game-related information, and configured to select either the image and audio information corresponding to a channel desired by a user, or a game program ordered by the user; and
  - a common game interface module configured to demodulate a selected game program and game-related information, to error correct, download and process the demodulated game program and game-related information, and to store the game program for access by a user when desired.
6. The device according to claim 5, wherein the common game interface module includes a downloader configured to download the game program ordered by the user using the game-related information.
7. The device according to claim 6, wherein the common game interface module further comprises:
  - a game memory configured to store the downloaded game program; and
  - a CPU configured to execute the stored game program.

8. The device according to claim 7, wherein the CPU is configured to execute the game program upon receipt of a controlling command input through a user interface.

9. A game service receiving device, comprising:  
a processor configured to receive an input from a user interface, and to output either a first control signal to select a broadcast signal of a channel desired by a user, or a second control signal to order a game desired by the user;  
a modem configured to receive the second control signal and to output a corresponding game ordering signal; and  
a common game interface module configured to receive the first control signal and to demodulate a broadcast signal of a channel selected by the user, a game program, and game-related information, wherein the common game interface module is also configured to error correct, download, store, and process the demodulated game-related information so as to allow a user to view the selected channel or execute the selected game.

10. The device according to claim 9, further comprising a common interface host configured to provide a resource for processing the game program and the game-related information.

11. The device according to claim 9, wherein the common game interface module includes a downloader configured to download the game program ordered by the user using the game-related information.

12. The device according to claim 9, wherein the common game interface module further comprises:

- a game memory configured to store the downloaded game program; and
- a CPU configured to execute the stored game program.

13. The device according to claim 12, wherein the CPU is configured to execute the game upon receipt of a signal from a user interface.

14. A game service transmitting method, comprising:

- converting image and audio information of a broadcast signal, a game program, and game-related information by packet unit on a time basis into a transport stream;
- coding the transport stream; and
- amplifying, modulating, and transmitting the transport stream over a certain channel.

15. The method according to claim 14, wherein converting image and audio information of the broadcast signal, a game program, and game-related information by packet unit on a time basis into a transport stream further comprises:

adding a new game program desired by a user and game-related information to a previously established game list; and

converting the new game program and game-related information into a transport stream.

16. A game service receiving method, comprising:

extracting a game list comprising game-related information from a transport stream that includes time basis multiplexed packet units of image and audio information of a broadcast signal, a listing of game programs, and game-related information;

downloading a game program desired by a user according to the game-related information and storing the game program in a game memory portion of a receiving device; and

executing the game when desired by the user.

17. The method according to claim 16, further comprising requesting a game program desired by the user from a transmitting party when the game program desired by the user is not included in the extracted game list.

18. The method according to claim 16, wherein the game-related information comprises a packet identifier (PID) configured to identify a packet of a game program ordered by a user, and a game list.

19. The method according to claim 16, further comprising:  
displaying the extracted game list on a display; and  
requesting a game desired by the user from a transmitting party when the game program desired by the user is not included in the displayed game list.

20. A broadcast and game receiving device, comprising:  
a downloader configured to receive a transport stream having time basis multiplexed packet units of image and audio information of a broadcast signal of a channel, a game program, and game-related information, and to download a game program ordered by a user using the game-related information encoded with the image and audio information of the broadcast signal;  
a game memory configured to store the downloaded game program for access by a user when desired; and  
a CPU configured to execute the stored game program in response to a user request.